THE MURPHY CHEMICAL COMPANY LIMITED,
WHEATHAMPSTEAD,
HERTS.

ADVISORY BULLETIN No. 10

ON

The Control of Scab

on

Apples and Pears

before Blossoming.

KEEP THESE BULLETINS IN THE GRATIS FILING COVER WE SUPPLY.

Scab Control before Blossoming.

Recommendations for the control of Scab after blossoming have already been given in Advisory Bulletin No. 6.

For pre-blossom Scab control we recommend :—

ON APPLES.

(*a*) WET SPRAYS.

For all varieties (except those "sulphur-shy" like NEWTON WONDER and STIRLING CASTLE) Lime Sulphur at 1 in 20 (5%) in conjunction with an efficient Wetter and Spreader. Lead Arsenate at the rate of 2 lbs. powder or 4 lbs. paste, per 100 gallons wash, can be added, if desired, for the control of Tortrix or other caterpillars. The Lime Sulphur and Lead Arsenate should conform to the specifications laid down by the Ministry of Agriculture (Ministry Bulletin No. 82).

A first application should be made at the green bud stage and a second application given at pink bud. This green bud application is especially necessary on varieties like COX and WORCESTER, which are liable to wood infection. If, on varieties which do not suffer from wood infection, such as BRAMLEY or DERBY, it is desired to give only one pre-blossom application then it should be given at the pink bud stage, but in many orchards, especially in a wet year, it is not wise to omit the green bud application even on varieties not susceptible to wood infection.

On NEWTON and STIRLING or other "sulphur-shy" varieties the Lime Sulphur should be replaced by home-made Bordeaux Mixture or by Bordeaux Paste used at the rate of 10—20 lbs. per 100 gallons water or by Copper Lime Dust used as a wet spray at the rate of 10 lbs. per 100 gallons water. The addition of a suitable Wetter and Spreader to these washes is of advantage and, if desired, Lead Arsenate can be added for Caterpillar control.

Copper Fungicides, applied either as wet sprays or dusts, can be used with safety on almost all varieties at green bud, but they should not be used at pink bud or after blossoming on BATH, COX, DERBY, DUCHESS, GLADSTONE, GRIEVE, or SUDELEY. Further, where it is desired to use a Sulphur-containing spray or dust on the trees after blossoming, a Sulphur Fungicide should be used on them before blossoming as well, otherwised scorch and defoliation due to "sulphur shock may result. Severe scorching has been known to occur from Lime Sulphur applied after blossoming, when it has followed the application of a Copper Fungicide before blossoming or where there has been no pre-blossom spraying at all.

The addition of an efficient Wetter and Spreader to Lime Sulphur or Copper Fungicides materially increases the amount of toxic material deposited and retained upon the leaf, and hence improves the fungicidal value of the wash.

(*b*) Dusts.

We do not recommend the general use of dusts for Scab control on apples before blossoming. Although under favourable circumstances pre-blossom dustings have given good results, as a general rule wet spraying is much more satisfactory. Where other factors, such as shortage of water, necessitate the use of dusts, at least two applications should be given before blossoming, at green and pink bud. On varieties susceptible to wood infection (such as COX or WORCESTER) an additional dusting, between the green bud and pink bud applications, may be given with advantage. It is generally assumed that two dustings are equivalent to one wet spraying for Scab control. The materials employed may be finely divided, high Sulphur Content, Sulphur Dust, or good quality Copper Lime Dust, depending on the variety.

ON PEARS.

(*a*) Wet Sprays.

For all varieties we advise the use of Lime Sulphur at 1 in 20. Home-made Bordeaux Mixture, or Bordeaux Paste at 10—20 lbs. per 100 gallons water, or Copper Lime Dust at 10 lbs. per 100 gallons water may also be used. Some growers have found that an excellent control of Scab can be obtained by the use of Eau Celeste at a strength of 1 in 80. A first application of any of these sprays should be given at green bud and another at white bud. Care should be exercised in spraying Doyenne du Comice, for this variety is liable to injury by post-blossom applications of both Copper and Sulphur-containing sprays..

(*b*) Dusts.

Up to the present, dusts have not been recommended to any extent for use on pears, either before or after blossoming.

APPLICATION.

(*a*) Wet Sprays.

The sprays should be applied, if possible, on a fine, still day, but not in strong sunshine. A medium nozzle should be used with high pressure and both upper and lower sides of the leaves and twigs should be thoroughly wetted. The quantity of wash required per tree per application, varies from about 1 gallon for trees with a spread of 10—12 feet, to about 4 gallons for trees with a spread of 24 feet. On an average, about 200 gallons of diluted wash will be sufficient to spray one acre of apples or pears.

(*b*) Dusts.

Sulphur or Copper Lime Dusts should be applied with an efficient hand-dusting or power machine on a fine, still day, so that an enveloping cloud of dust is obtained, coating both upper and lower surfaces of leaves and and twigs. Generally, 20—30 lbs. of dust per application are sufficient for 1 acre of bush trees.

SCAB CONTROL SUMMARY.

APPLES.

On most varieties give two pre-blossom applications of Lime Sulphur, at 1 in 20 at green and pink bud, followed after blossoming by Lime Sulphur at 1 in 60 (1 in 100 on some varieties) at petal fall and again three weeks later.

As a general rule, dusts should only be used after blossoming and two dustings should be given in place of one wet spraying.

PEARS.

Lime Sulphur at 1 in 20 or home-made Bordeaux Mixture, or Bordeaux Paste at 10—20 lbs. per 100 gallons water, or Copper Lime Dust at 10 lbs. per 100 gallons water, should be applied at green bud and again at white bud. After blossoming, an application should be made at petal fall and again three weeks later. The concentration of Lime Sulphur applied after blossoming should be reduced to 1 in 100. Dusts are not generally recommended for use on pears.

February, 1935.

CORRECTION.

In Advisory Bulletin No. 9, owing to an error, we advised the use of a mixture of Lime Sulphur, Nicotine and Soft Soap (or a good Wetter and Spreader) to control Red Spider and Aphis on Violets. Soft Soap must not be used with Lime Sulphur. An efficient Wetter and Spreader must be used instead.

We supply :—

ALVESCO LIME SULPHUR.
SULFADU Dusting Sulphur.
COPPER LIME DUST.
ALVESCO BORDEAUX PASTE.
ALVESCO EAU CELESTE.
LEAD ARSENATE (Powder and Paste).
ALVESCO SOLUBLE SPREADER.
SPREADITE (Wetter and Penetrant).

Lime Sulphur and Lead Arsenate are standard products for which specifications appear in Bulletin No. 82 of the Ministry of Agriculture and Fisheries. The above materials conform to these specifications.